Message

From: Mike Petersen [mpetersen@landscouncil.org]

Sent: 6/6/2018 12:26:04 AM

To: Doug Krapas [dougkrapas@iepco.com]; Lindsay, Robert [RLindsay@spokanecounty.org]; ABOR461@ECY.WA.GOV;

Vikki Barthels [vbarthels@srhd.org]; Whitman, Kara Michelle [kmwhitman@wsu.edu]; Greenlund, Doug [dgreenlund@spokanecity.org]; VanBergen, Saskia (ECY) [sava461@ECY.WA.GOV]; Mullin, Michelle

[Mullin.Michelle@epa.gov]; Lauren Heine [lheine@northwestgreenchemistry.org]

CC: Jerry White [jerry@cforjustice.org]; Olsen, Catherine [COlsen@SpokaneCity.org]; Amanda Parrish

[aparrish@landscouncil.org]

Subject: RE: Titanium Dioxide in products

Yes, good to be cautious about what we say! Most of you have seen this report from the WA Dept of Ecology from 2016. It lists a variety of products that they tested for PCBs. Check out appendix B, pp. 27-35. It lists the amt of PCBs in 216 consumer products, including samples of white road paint, toothpaste, and sunscreen. Bottom of page 34 lists a sunscreen and three toothpastes with PCB's in the 0.1 ppb range.

https://fortress.wa.gov/ecy/publications/documents/1604014.pdf

From: Doug Krapas <dougkrapas@iepco.com>

Sent: Tuesday, June 05, 2018 5:18 PM

To: Lindsay, Robert <RLindsay@spokanecounty.org>; Mike Petersen <mpetersen@landscouncil.org>; Adriane Borgias

(ECY) <ABOR461@ECY.WA.GOV>; Vikki Barthels <vbarthels@srhd.org>; Whitman, Kara Michelle

<kmwhitman@wsu.edu>; Greenlund, Doug <dgreenlund@spokanecity.org>; VanBergen, Saskia (ECY)

<sava461@ECY.WA.GOV>; Mullin, Michelle <Mullin.Michelle@epa.gov>; Lauren Heine

<pr

Cc: Jerry White <jerry@cforjustice.org>; Olsen, Catherine <COlsen@SpokaneCity.org>; Amanda Parrish

<aparrish@landscouncil.org>

Subject: RE: Titanium Dioxide in products

Just a caution about being too hasty to start publicly listing "potential" products just because they contain TiO2. As you eluded to Mike, the next step should perhaps be testing of a subset of identified products based on some evaluation criteria (such as: more likely to contain chlorinated TiO2 based on research, more prevalent use, has a greater pathway to the river, etc.). I have a sneaking suspicion that FDA exposed/approved products may require the non-chlorinated TiO2 for numerous other reasons beyond the potential for inadvertent PCBs. Perhaps this would be a good next step study for one of your "great volunteers"...research FDA to see if there are any TiO2 constraints or approved processes for use.

We should also consider the legal implications of listing specific manufacturer products publicly and making any claims. Perhaps we could consult with Rick on this...maybe an interesting project for his students.

In regards to donuts and skittles, I am willing to accept the health risk (of which there are more than one \mathfrak{S}).

Doug

From: Lindsay, Robert [mailto:RLindsay@spokanecounty.org]

Sent: Monday, June 04, 2018 9:57 AM

To: Mike Petersen; Adriane Borgias (ECY); Vikki Barthels; Whitman, Kara Michelle; Greenlund, Doug; VanBergen, Saskia

(ECY); Mullin, Michelle; Lauren Heine

Cc: Doug Krapas; Jerry White; Olsen, Catherine; Amanda Parrish

Subject: RE: Titanium Dioxide in products

Thanks, Mike. This is good investigation.

I'm agreeable to looking at products that our customers flush or rinse into the collection systems, and provide information and outreach opportunities.

Rob

Ps...I'm a little bummed that sour neon worms made it onto the titanium dioxide list...who knew?

From: Mike Petersen [mailto:mpetersen@landscouncil.org]

Sent: Friday, June 01, 2018 12:42 PM

To: Adriane Borgias (ECY) <ABOR461@ECY.WA.GOV>; Vikki Barthels <vbarthels@srhd.org>; Whitman, Kara Michelle

kmwhitman@wsu.edu; Greenlund, Doug dgreenlund@spokanecity.org; VanBergen, Saskia (ECY)

<sava461@ECY.WA.GOV>; Mullin, Michelle <Mullin.Michelle@epa.gov>; Lindsay, Robert

<RLindsay@spokanecounty.org>; Lauren Heine < heine@northwestgreenchemistry.org>

Cc: Doug Krapas dougkrapas@iepco.com; Jerry White jerry@cforjustice.org; Olsen, Catherine

<<u>COlsen@SpokaneCity.org</u>>; Amanda Parrish <<u>aparrish@landscouncil.org</u>>

Subject: Titanium Dioxide in products

Green Chemistry Workgroup,

At the last task force meeting I brought up the use of titanium dioxide in consumer products and said I would compile a list. Since one of the main ways of producing titanium dioxide from ore uses a chlorination process, it can contain PCB's. For example a sunscreen I have contains 7% titanium dioxide.

One of my thoughts in doing this is that informing consumers/manufactures about products that are swallowed, rubbed on our face, might be an educational opportunity to highlight how PCB's find their way into Spokane, and ultimately the river. One of our great volunteers went "shopping" and compiled the attached list. She is also doing research trying to find how much of the titanium dioxide production is made using the chlorinated process, and how much using another sulfur based process.

The next step might be to test a few of the products on the list to see what, if any, levels of PCB's are contained in them.

Just like we have made great progress on yellow road paint, maybe this could help our overall outreach campaign - and I might cut back on donuts and skittles!

Thanks,

Mike

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